

ABSTRACT

A high contrast twisted nematic liquid crystal cell in which outgoing or reflected light is linearly polarized and has the same polarization angle as incoming or incident light when the cell is in an off state. Matching the polarization axes of incoming and outgoing light allows less light to pass through a final analyzer with the cell in an off state to provide a darker off state, and allows more light through with the cell in an on state, resulting in an enhanced contrast ratio display. A method of determining placement of optical retarders for enhanced contrast in a reflective twisted nematic liquid crystal display device is also described.

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